

K.3500

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S/020/61/137/005/007/026  
C111/C222

AUTHORS: Kamynin, L.I., and Maslennikova, V.N.

TITLE: The solution of the first boundary problem in the large for a quasilinear parabolic equation

PERIODICAL: Akademiya nauk SSSR. Doklady, vol.137,no.5,1961, 1049-1052

TEXT: The authors consider the first boundary value problem for the quasilinear parabolic equation

$$Lu = \sum_{i,j=1}^n a_{ij}(x,t) \frac{\partial^2 u}{\partial x_i \partial x_j} + \sum_{i=1}^n b_i(x,t,u) \frac{\partial u}{\partial x_i} - \frac{\partial u}{\partial t} f(x,t,u, \nabla u), \quad (1)$$

where  $\nabla u = (\partial u / \partial x_1, \partial u / \partial x_2, \dots, \partial u / \partial x_n)$  in non-cylindrical regions D.

The authors consider the existence and uniqueness of the solution in the large.

Let D be an  $(n+1)$ -dimensional region of the  $(x_1, x_2, \dots, x_n; t) = (x, t)$  bounded by  $t = 0$ ,  $t = T > 0$  and a closed surface S. Let  $\Omega = \overline{D} \cap \{t=0\}$ ,  $\Gamma = S \cup \Omega$ . The authors introduce the norms

$$\|v\|_0^D = \sup_{(x,t) \in D} |v(x,t)|, \quad \|v\|_\alpha^D = \|v\|_0^D + H_\alpha^D [v],$$

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$$H_{\alpha}^D[v] = \sup_{P_1, P_2 \in D} \frac{|v(P_1) - v(P_2)|}{[d(P_1, P_2)]^{\alpha}},$$

where the distance between  $P_1(\bar{x}_1, \bar{x}_2, \dots, \bar{x}_n; \bar{t})$  and  $P_2(\bar{\bar{x}}_1, \bar{\bar{x}}_2, \dots, \bar{\bar{x}}_n; \bar{\bar{t}})$   
is given by

$$d(P_1, P_2) = \left( \sum_{i=1}^n (\bar{x}_i - \bar{\bar{x}}_i)^2 + |\bar{t} - \bar{\bar{t}}| \right)^{1/2}. \quad (2)$$

Furthermore let

$$|v|_{1+\alpha}^D = |v|_{\alpha}^D + \sum_{i=1}^n \left| \frac{\partial v}{\partial x_i} \right|_{\alpha}^D,$$

$$|v|_{2+\alpha}^D = |v|_{1+\alpha}^D + \sum_{i=1}^n \left| \frac{\partial v}{\partial x_i} \right|_{1+\alpha}^D + \left| \frac{\partial v}{\partial t} \right|_{\alpha}^D.$$

I. It is assumed that  $S$  can be covered by a finite number of spheres  $W_j$   
so that the piece  $S_j$  of  $S$  obtained in  $W_j$ , for a certain  $i$  admits the

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$$x_i = h(x_1, x_2, \dots, x_{i-1}, x_{i+1}, \dots, x_n; t)$$

$$(x_1, x_2, \dots, x_{i-1}, x_{i+1}, \dots, x_n, t) \in \Sigma_j,$$

where  $h$  on  $\Sigma_j$  has two first derivatives with respect to  $x_k$  and one derivative with respect to  $t$  which satisfy the Hölder condition with the distance (2) and  $0 < \alpha < 1$ ; furthermore  $\partial h / \partial x_k$  on  $\Sigma_j$  satisfies the Lipschitz condition with the ordinary distance

$$\varsigma(p_1, p_2) = \left( \sum_{i=1}^n (\bar{x}_i - \tilde{x}_i)^2 + (\bar{t} - \tilde{t})^2 \right)^{1/2}. \quad (3)$$

For  $(x, t) \in \bar{D}$  let

$$\sum_{i,j=1}^n a_{ij}(x, t) \lambda_i \lambda_j \geq a_0 \sum_{i=1}^n \lambda_i^2. \quad (4)$$

Let

II. for all  $(x, t) \in \bar{D}$ ,  $|u| < \infty$ ,  $\partial f(x, t, u, 0) / \partial u \geq b_0$ ;

III. in  $(x, t) \in \bar{D}$ ,  $|w| < \infty$  ( $|w|^2 = \sum_{i=1}^n w_i^2$ ) and  $|u| \leq K \equiv (\sup_{\Gamma} |\psi| + \frac{\sup |f(x, t, 0)|}{b_0 + \gamma}) e^{\gamma T}$

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( $\gamma > 0$ ,  $\gamma + b_0 > 0$ ,  $\gamma = \text{const}$ ) let

$$|a_{ij}(x, t) - a_{ij}(\bar{x}, \bar{t})| \leq A_1 [d(P_1, P_2)]^\alpha \quad (5)$$

$$|b_i(x, t, u) - b_i(\bar{x}, \bar{t}, u)| \leq B_1 [d(P_1, P_2)]^\alpha + B_2 |u - \bar{u}|^\beta, \quad (6)$$

$$|f(x, t, 0, 0) - f(\bar{x}, \bar{t}, 0, 0)| \leq C_1 [d(P_1, P_2)]^\alpha,$$

$$\left| \frac{\partial f(x, t, u, 0)}{\partial u} - \frac{\partial f(\bar{x}, \bar{t}, \bar{u}, 0)}{\partial u} \right| \leq C_2 [d(P_1, P_2)]^\alpha + C_3 |u - \bar{u}|^\beta; \quad (7)$$

$$\left| \frac{\partial f(x, t, u, w)}{\partial w_i} \right| \leq C_4 \quad (i = 1, 2, \dots, n);$$

$$\left| \frac{\partial f(x, t, u, w)}{\partial w_i} - \frac{\partial f(\bar{x}, \bar{t}, \bar{u}, \bar{w})}{\partial w_i} \right| \leq D_1 [d(P_1, P_2)]^\alpha +$$

$$+ D_2 |u - \bar{u}|^\beta + D_3 \left[ \sum_{i=1}^n (w_i - \bar{w}_i)^2 \right]^{\beta/2} \quad (i = 1, 2, \dots, n), \quad (8)$$

where  $0 < \alpha < 1$ ,  $0 < \beta \leq 1$ .

IV. On  $\Sigma_j$  the  $a_{ij}(x, t)$  satisfy in  $(x, t)$  the Lipschitz condition with the distance (3).

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V. Let in  $\bar{D}$  exist a function  $\Psi(x, t)$  which on  $\Gamma$  agrees with the given boundary function  $\psi(x, t)$  and for which  $|\Psi|_{2+\alpha}^D < \infty$ .

Theorem 1: If  $S$ , the coefficients of (1) and  $(x, t)$  satisfy all conditions (4), I-V, then there exists a solution  $u(x, t)$  of (1) continuous in  $D$ , and

$$u|_{\Gamma} = \Psi(x, t), \quad (9)$$

where exist constants  $M$  and  $\lambda$  ( $0 < \lambda \leq \alpha \beta < 1$ ) so that in  $\bar{D}$  it holds

$$|u|_{2+\lambda}^D \leq M(|f(x, t, 0, 0)| + |\Psi|_{2+\alpha}), \quad (10)$$

where  $M$  depends on  $D, S, \alpha, \beta, \lambda, K, a_0, A_1, B_1, B_2, C_1, C_2, C_3, C_4, D_1, D_2, D_3$ .

Theorem 2 is due to A.Friedman (Ref.1: J.Math. and Mech., 9, no.4, 539 (1960)).

For  $\beta = 1$  from theorem 2 there follows the uniqueness of the solution the existence of which was proved in theorem 1.

Theorem 3: Let  $S$  be an arbitrary closed surface. Let the quasilinear operator

$$\Lambda u = \sum_{i,j=1}^n a_{ij}(x, t, u, \nabla u) \frac{\partial^2 u}{\partial x_i \partial x_j} - \frac{\partial u}{\partial t}$$

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be parabolic in  $\bar{D}$ , i.e. for  $(x,t) \in \bar{D}$  let

$$\sum_{i,j=1}^n a_{ij}(x,t,u,w) \lambda_i \lambda_j \geq a(u,w) \sum_{i=1}^n \lambda_i^2, \quad (11)$$

where  $a(u,w) > 0$  is a non-increasing function of  $(|u| + |w|)$  for  $(|u| + |w|) < \infty$ .If  $a_{ij}(x,t,u,w)$  and  $f(x,t,u,w)$  are locally continuous in  $u$  in the sense of Lipschitz then there exists at most one solution of the first boundary value problem for

$$\Delta u \equiv f(x,t,u,\nabla u) \quad (12)$$

with the boundary condition (9), which is continuous in  $\bar{D}$  and has there bounded derivatives  $\partial u / \partial x_i$ ,  $\partial^2 u / \partial x_i \partial x_j$  ( $i, j = 1, 2, \dots, n$ ).Lemma: If  $f(x,t,u,w)$  is continuous in all arguments and if  $\|u\| < \infty$ 

$$|f(x,t,u,0)| \leq c_5 + c_6 \|u\|, \quad (13)$$

then for every solution of (12), (9) continuous in  $\bar{D}$  (where  $\Delta$  of (12) has continuous coefficients  $a_{ij}$  and satisfies (11)) there holds the a priori

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estimation

$$\sup_{\bar{D}} |u(x,t)| \leq K_1 \left( \sup_{\Gamma} |\psi| + \frac{C_5}{\gamma - C_6} \right) e^{\gamma T} \quad (14)$$

(y>0 arbitrary so that  $\gamma - C_6 > 0$ ).

Theorem 4: Let S satisfy I; let  $\psi(x,t)$  satisfy V; let  $a_{ij}(x,t)$  satisfy (4), (5) and IV. Let (13) be satisfied for all  $|u| < \infty$ . In  $(x,t) \in \bar{D}$ ,  $|\psi| < \infty$ ,  $|u| \leq K_1$  ( $K_1$  from (14)), let (6), (8) and

$$|f(x,t,u,0) - f(\bar{x},\bar{t},\bar{u},0)| \leq C_7 [d(P_1, P_2)]^\alpha + C_8 |u - \bar{u}|^\beta$$

be satisfied. For  $\partial f(x,t,u,w)/\partial w_i$  it holds (7). Then there exists a solution  $u(x,t)$  of (1), (9) continuous in  $\bar{D}$ , for which it holds (10), where M depends on D, S,  $\alpha, \beta, \lambda, A_1, B_1, B_2, C_4, C_5, C_6, C_7, C_8, D_1, D_2, D_3$ .

There are 2 non-Soviet-bloc references. The two references to English-language publications read as follows: A.Friedman, J.Math.and Mech., 9, no. 4, 539 (1960). A.Friedman, J.Math.and Mech., 7, no. 5, 771 (1958).

ASSOCIATION: Matematicheskiy institut im.V.A.Steklova Akademii nauk SSSR  
(Mathematical Institute im.V.A.Steklov AS USSR)

PRESENTED: November 12, 1960, by S.L.Sobolev, Academician

SUBMITTED: November 11, 1960

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38567

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S/039/62/057/002/003/003  
B172/B112AUTHORS: Kamynin, L. I., and Maslennikova, V. N. (Moscow)

TITLE: Solution of the first boundary value problem for a quasi-linear parabolic equation in non-cylindrical domains

PERIODICAL: Matematicheskiy sbornik, v. 57 (99), no. 2, 1962, 241-264

TEXT: The quasilinear parabolic equation

$$\sum_{i,j=1}^n a_{ij}(x,t) \frac{\partial^2 u}{\partial x_i \partial x_j} + \sum_{i=1}^n b_i(x,t,u) \frac{\partial u}{\partial x_i} - \frac{\partial u}{\partial t} = f(x,t,u \nabla u) \quad (0.1)$$

is considered in a domain D bounded by hypersurfaces  $t = 0$ ,  $t = T > 0$  and a closed surface S which lies between them and has the following properties: S can be overlapped by a finite number of spheres  $W_j$  such that the

intersection of S and  $W_j$  permits a representation

$$x_i = h(x_1, x_2, \dots, x_{i-1}, x_{i+1}, \dots, x_n; t)$$

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where the function  $h$  and its derivatives satisfy certain Hölder and Lipschitz conditions. The studies made by A. Friedman (Journ. Math. and Mech., 7, nos. 3 and 5 (1958), 9, no. 4 (1960)) in which the linear equation corresponding to equation (0.1) is considered, are continued. Using the  $(1 + \delta)$ -estimation and Shauder's fixed point theorem for continuous mappings in Banach spaces, the authors prove a series of existence theorems under different conditions for  $f$  that are more general than Friedman's results. The barriers introduced by Pogorzelski are used.

SUBMITTED: January 24, 1961

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S/020/62/146/002/002/013  
B112/B102

16,350,

AUTHOR:

Maslennikova, V. N.

TITLE:

A class of systems of quasilinear diffusion equations

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 146, no. 2, 1962, 303 - 306

JB

TEXT: The following boundary value problem is considered:

$\Lambda(u) = \sum_{i,j=1}^n a_{ij}(x, t) \frac{\partial^2 u}{\partial x_i \partial x_j} + \sum_{i=1}^n b_i(x, t, u) \frac{\partial u}{\partial x_i} - \frac{\partial u}{\partial t}$

$- f(x, t, u, \nabla u) = h(x, t, u, w), \frac{\partial w}{\partial t} = g(x, t, u, w); u(x, t) = u_0(x, t)$

on  $\partial D$ ,  $w(x, t) = w_0(x)$  for  $t = 0$ . The operator  $\Lambda$  is supposed to be parabolic. It is proved that the solutions  $u$  and  $w$  of this problem have the properties  $u \in C^{2+\alpha}$ ,  $w \in C^\alpha$ ,  $\frac{\partial w}{\partial t} \in C_\alpha$ , where  $C^{2+\alpha}$  is the set of all the functions having second-order derivatives with respect to  $x_k$  and first-order derivatives with respect to  $t$ , and satisfying a Hölder condition with an exponent  $\alpha$  ( $0 < \alpha < 1$ ).

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A class of systems ...

ASSOCIATION: Matematicheskiy institut im. V. A. Steklova Akademii nauk  
SSSR (Mathematical Institute imeni V. A. Steklov of the  
Academy of Sciences USSR)

PRESL. TED: April 4, 1962, by S. L. Sobolev, Academician.

SUBMITTED: March 30, 1962

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L 14274-63

EWT(a)/FCC(w)/BDS

AFFTC

IJP(C)

ACCESSION NR: AP3001100

8/0208/63/003/003/0467/0477

51

AUTHOR: Maslennikova, V. N. (Moscow)

TITLE: First boundary value problem for quasi-linear systems in mathematical diffusion theory (6)

SOURCE: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 3, no. 3, 1963, 467-477.

TOPIC TAGS: boundary value problem, comparison theorem, quasi-linear parabolic operator, existence, uniqueness

ABSTRACT: The author proves existence and uniqueness theorems for the quasi-linear system

$$\begin{aligned} \Delta u &= \sum_{i,j=1}^n a_{ij}(x,t) \frac{\partial^2 u}{\partial x_i \partial x_j} + \sum_{i=1}^n b_i(x, t, u) \frac{\partial u}{\partial x_i} - \frac{\partial u}{\partial t} - f(x, t, u, \nabla u) = \\ &= h(x, t, u, w); \quad \frac{\partial u}{\partial t} = g(x, t, u, w), \end{aligned}$$

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ACCESSION NR: AF3001100

whose coefficients are given in the closure of the cylindrical region  $D_T$ , defined in  $x \in B, 0 < t < T\}$

where  $B$  is a bounded region of the  $n$ -dimension space of the "position" variables and  $\Delta$  is parabolic. The system is solved subject to the boundary conditions

$$u(x, t) = u_0(x, t) \text{ on } \partial D,$$

$$w(x, t) = w_0(x) \text{ for } t = 0$$

( $\partial D$  is the boundary of  $D_T$ , i.e., the lateral surface of the cylinder and its base for  $t = 0$ ).

Various comparison theorems enable proof of the main theorems, which are too involved to state here. Orig. art. has 23 formulas.

ASSOCIATION: none

SUBMITTED: 15May62

DATE ACQ: 10Jun63

ENCL: 00

SUB CODE: MM

NO REF Sov: 003

OTHER: 002

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L 12667-63 EWT(1)/BDS/EPF(h)-2/ES(v) AFFTC/ASD/SSD Pu-4/Pe-4 WW  
ACCESSION NR: AP3002865 8/0020/63/150/005/0991/0994

AUTHOR: Maslennikova, V. N.

TITLE: Boundary-value problem of the first kind for quasi-linear systems of diffusion

SOURCE: AN SSSR. Doklady\*, v. 150, no. 5, 1963, 991-994

TOPIC TAGS: existence, uniqueness theorem

ABSTRACT: Existence and uniqueness theorems are stated for system (1) of the Enclosure with boundary conditions (2) and (3) of the Enclosure. It is indicated that such problems occur in the theory of nuclear reactors, in the study of thermal processes in solidifying liquids and other problems of mathematical physics. Orig. art. has: 18 formulas.

ASSOCIATION: Matematicheskiy institut im. V. A. Steklova Akademii Nauk SSSR  
(Mathematical Institute, Academy of Sciences SSSR)

SUBMITTED: 09Jan63 DATE ACQ: 15Jul63 ENCL: 01

SUB CODE: 00 NO REF SOV: 003 OTHER: 002

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KAMYNIN, L.I.; MASLENNIKOVA, V.N.

Boundary estimates of the solution to the third boundary  
value problem for a parabolic equation. Dokl. AN SSSR 153  
no.3:526-529 N '63. (MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova  
i Matematicheskiy institut im. V.A. Steklova AN SSSR. Pred-  
stavлено akademikom S.L. Sobolevym.

L 20812-66 EWT(d) IJP(c)

ACC NR: AP6012029

SOURCE CODE: UR/0020/65/160/003/0527/0529

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B

AUTHOR: Kamynin, L. I.; Maslennikova, V. N.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet); Mathematics Institute im. V. A. Steklov, AN SSSR (Matematicheskiy institut AN SSSR)

TITLE: Boundary evaluations of the solution to a problem involving a directional derivative for a parabolic equation in a non-cylindrical region

SOURCE: AN SSSR. Doklady, v. 160, no. 3, 1965, 527-529

TOPIC TAGS: second order equation, mathematics

ABSTRACT: A parabolic equation of the second kind is considered with given initial and boundary conditions. Evaluations and existence of solutions are given using the methods of I. G. Petrovskiy. This paper was presented by Academician S. L. Sobolev on 30 June 1964. Orig. art. has: 8 formulas. [JPRS]

SUB CODE: 12 / SUBM DATE: 23Jun64 / ORIG REF: 003 / OTH REF: 002

Card 1/1

KHALABUZAR', A.M.; MASLENNIKOVA, V.P.

Clinical aspects and pathogenesis of hemorrhagic telangiectasis.  
Sov. med. 18 no.11:33-34 N '54. (MIRA 7:12)

1. Iz fakul'tetskoy terapevticheskoy kliniki (dir.-prof. P.N. Lukomskiy) II Moskovskogo med. instituta imeni I.V.Stalina.  
(TELANGIECTASIS  
hemorrhagic, clinic & pathogen.)

MAS-LENIN (P-6 v. 7) ✓ 3  
SAMSONOV, G.V.; SHUVALOVA, L.M.; SHESTERIKOVA, M.P.; LAVENT'YEVA, S.F.;  
MASLISHNIKOVA, V.S.; KONONOVA, A.A.; BOKAREVA, V.V.

Statics and dynamics of the ion exchange of aureomycin and terramycin  
with hydrogen and sodium ions on cationites. Kell.zhur.18 no.4:474-479  
Jl-Ag '56. (MIRA 9:10)

1.Institut vysokomolekulyarnykh soedineniy Akademii nauk SSSR, Lenin-  
grad.  
(Ion exchange) (Aureomycin) (Terramycin)

MASLENNIKOVA, V.V.

Calculating the behavior of oscillator tubes by the method of fanned idealisation of their static characteristics. Trudy IPI no.194:35-43  
'58. (MIRA 11:11)

(Oscillators, Electron-tube)

9.1300, 9.4300

77791  
SOV/109-5-2-24/26AUTHOR: Maslennikova, V. V.

TITLE: Calculation of Cylindrical Waveguides With Transverse Magnetized Ferrite. Brief Communication

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol 5, Nr 2,  
pp 345-348 (USSR)

ABSTRACT: Exact calculations of cylindrical waveguides with ferrite are very complicated; wherefore approximated solutions by the method of perturbations are used. For problems of cylindrical waveguides with transverse magnetized ferrite, the h-f field in the ferrite, described by cylindrical coordinates, is transformed to orthogonal coordinates, thus making possible the use of the tensor of magnetic permeability, described in orthogonal coordinates:

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$$\tilde{\mu} = \begin{bmatrix} \mu & -jk & 0 \\ jk & \mu & 0 \\ 0 & 0 & \mu_3 \end{bmatrix}. \quad (1)$$

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where the tensor components are measured in units of  $\mu_0$ . These calculations are very complicated, and therefore, the group of problems which can be solved by this method is very limited. The calculations become much simpler and more exact if the problem is solved in cylindrical coordinates  $(r, \varphi, z')$ , and the tensor of magnetic permeability is also described in the same coordinate system. Components of the tensor of magnetic permeability in the cylindrical system of coordinates depend on the configuration of the constant magnetic field  $H^0$  applied to the ferrite, which may be longitudinal, radial, circular, or transverse. The tensor of magnetic permeability for the above cases can be determined either by solving the equation of Landau-Lifschitz in cylindrical coordinates or by transforming Eq. (1) to cylindrical coordinates. The latter method is used in this paper. Besides the cylindrical coordinate system in each point, a local

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rectangular coordinate system ( $x'$ ,  $y'$ ,  $z'$ ) is added, whose axis  $z'$  coincides with the direction of the magnetizing field  $\vec{H}_o$  at this point. The transformed tensor (1) in the coordinate system  $r$ ,  $\varphi$ ,  $z'$  is expressed as follows: (a) For a longitudinal magnetizing field  $\vec{H}_o \vec{e}_{z'} = 0$ :

$$\tilde{\mu} = \begin{bmatrix} \mu & -ik & 0 \\ ik & \mu & 0 \\ 0 & 0 & \mu_s \end{bmatrix} \quad (3)$$

(b) For a radial magnetizing field  $\vec{H}_o \vec{e}_r = 0$ :

$$\tilde{\mu} = \begin{bmatrix} \mu_s & 0 & 0 \\ 0 & \mu & -ik \\ 0 & ik & \mu \end{bmatrix} \quad (4)$$

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(c) For a circular magnetizing field  $\vec{H}_o \vec{e}_\theta = 0$ :

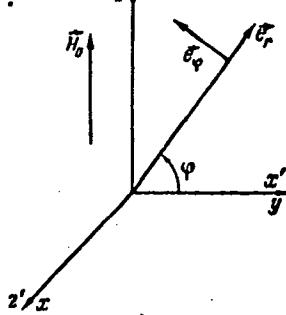
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$$\hat{\mu} = \begin{bmatrix} \mu & 0 & -jk \\ 0 & \mu_s & 0 \\ jk & 0 & \mu \end{bmatrix} \quad (5)$$

(d) For a transverse magnetizing field  $\vec{H}_o \cdot \vec{e}_z = 0$ .

Figure 1 shows the rotation of the coordinate system corresponding to this case.



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Fig. 1. The transformed tensor (1) is:

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$$\frac{z}{\mu} = \begin{bmatrix} \mu \cos^2 \varphi + \mu_3 \sin^2 \varphi_0 & \frac{\mu_3 - \mu}{2} \sin 2\varphi & jk \cos \varphi \\ \frac{\mu_3 - \mu}{2} \sin 2\varphi & \mu \sin^2 \varphi + \mu_3 \cos^2 \varphi & -jk \sin \varphi \\ -jk \cos \varphi & jk \sin \varphi & \mu \end{bmatrix} \quad (6)$$

The method is applied to the solution of three problems by the method of perturbation. (a) Coaxial waveguide with a thin ferrite plate (Fig. 2).

$$\Delta \Gamma = \frac{\pi}{2\lambda} \frac{d}{R_2} \left( \frac{1}{\epsilon_0 (\mu \sin^2 \varphi_0 + \mu_3 \cos^2 \varphi_0)} \right). \quad (7)$$

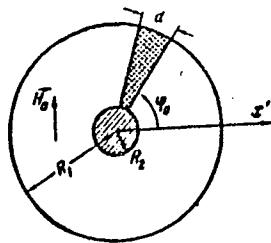
where  $\mu$  is dielectric permeability of ferrite;  $\epsilon_0$ , dielectric permeability of the medium filling the waveguide;  $\lambda$ , wavelength in air;  $d$ ,  $\varphi_0$ , and  $R_2$ , per Fig. 2. For  $\varphi_0 = 0$  the system is nonresonant, and the

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phase of wave is only weakly dependent on the constant field  $H_0$  magnitude; for  $\varphi_0 = 90^\circ$ ,  $\Delta\Gamma$  depends on the component  $\mu$  and the system is resonant, the phase of the wave being dependent on the magnitude of field  $H_0$ .



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Fig. 2.

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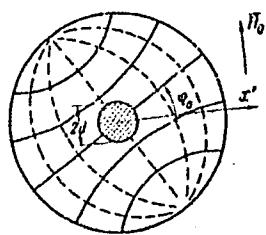


Fig. 3.

(b) Circular waveguide with H-type oscillations and  
a thin coaxial ferrite cylinder (Fig. 3).  
Card 7/12

Calculation of Cylindrical Waveguides  
With Transverse Magnetized Ferrite.  
Brief Communication

77791  
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$$\Delta\Gamma = \frac{(d/R)^2 A_{11}^2}{(A_{11}^2 - 1) J_1(A_{11})} \left\{ \left( \frac{s}{s_0} - 1 \right) \left( \frac{2\pi}{\lambda} \right)^2 \frac{1}{2\Gamma R} \left( \frac{1}{4} + \frac{s_0}{s} \right) + \frac{\Gamma}{V_{\mu\mu_3}} \frac{1}{8} \left[ V_{\mu\mu_3} - \right. \right. \\ \left. - 1 - \frac{V_\mu - V_{\mu_3}}{V_\mu + V_{\mu_3}} \cos 2\varphi_0 \right] + \frac{\Gamma}{2\mu_0} \left[ V_{\mu\mu_3} - 1 - \right. \\ \left. - V_{\mu\mu_3} \frac{V_\mu - V_{\mu_3}}{V_\mu + V_{\mu_3}} \cos 2\varphi_0 \right] - \frac{\Gamma}{2} \frac{V_\mu - V_{\mu_3}}{V_\mu + V_{\mu_3}} \cos 2\varphi_0 \right\}. \quad (8)$$

Here,  $\Gamma$  is propagation constant for unperturbed waveguide;  $A_{11}$ ) root of equation  $J_1(x) = 0$ ;  $(90^\circ - \varphi_o)$ , angle between polarization plane of h-f field with respect to the direction of the constant field  $\vec{H}_0$  (Fig. 3). Equation (8) indicates that the system is reciprocal, but the phase velocity of waves with longitudinal and transverse polarization ( $\varphi_o = 0$ ,  $\varphi_o = 90^\circ$ ) with respect to the direction of the constant field  $\vec{H}_0$

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Calculation of Cylindrical Waveguides  
With Transverse Magnetized Ferrite.  
Brief Communication

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SOV/109-5-2-24/26

(Fig. 3). Equation (8) indicates that the system is reciprocal, but the phase velocity of waves with longitudinal and transverse polarization ( $\varphi_0 = 0$ ,  $\varphi_0 = 90^\circ$ ) with respect to the direction of the constant field  $H_0$  are different. The polarization of the incident wave is being changed, and the ferrite divides it into two waves, of which one is polarized longitudinally, but the other transverse to the direction of  $H_0$ . Thus, a phase difference develops between these two waves varying along the waveguide, and a variation of polarization results from the linear at the beginning, through the elliptical, circular, elliptical, and back to the linear, etc. These systems may be used as a phase controller, or for fast acting changeover switches.

(e) Circular waveguide with a thin ferrite sector.

Card 9/12

Calculation of Cylindrical Waveguides  
With Transverse Magnetized Ferrite.  
Brief Communication

77791  
SOV/109-5-2-24/26

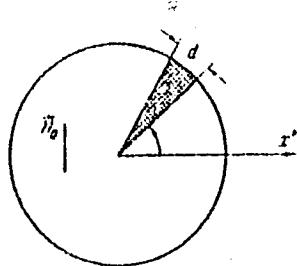


Fig. 4.

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Calculation of Cylindrical Waveguides  
With Transverse Magnetized Ferrite.  
Brief Communication

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SOV/109-5-2-24/26

$$\Delta \Gamma = \frac{(\epsilon - \epsilon_0) \left( \frac{\psi_0}{c} \right)^2 d/R}{0.6\pi\Gamma} + \left\{ 0.38 \cos^2(\psi_0' - \phi_0) + \frac{\mu_0}{R} 0.15 \sin^2(\psi_0' - \phi_0) \right\} + \\ + 0.37 \frac{\Gamma}{R} \frac{d}{R} \cos^2(\psi_0' - \phi_0) \left( 1 - \frac{1}{\mu \sin^2 \psi_0' + \mu_0 \cos^2 \psi_0'} \right) + \\ + 0.15 \frac{d}{R} \frac{2^4 R^2}{\pi^2} \sin^2(\psi_0' - \phi_0) \left( \mu - 1 - \frac{L^2 \sin^2 \psi_0'}{\mu \sin^2 \psi_0' + \mu_0 \cos^2 \psi_0'} \right) + \quad (9) \\ + 0.10 \frac{d}{R} \frac{\Gamma}{\pi} \sin 2(\psi_0' - \phi_0) \frac{(\mu_0 - 1) \sin 2\psi_0'}{\mu \sin^2 \psi_0' + \mu_0 \cos^2 \psi_0'} + \\ + 2 \operatorname{sign} \Gamma \left\{ 0.38 \frac{d}{R} \frac{x}{\pi} \frac{k}{2} \frac{\sin \psi_0' \sin 2(\psi_0' - \phi_0)}{\mu \sin^2 \psi_0' + \mu_0 \cos^2 \psi_0'} - 0.11 \frac{d}{R} \frac{x}{R} \frac{\sin^2(\psi_0' - \phi_0) \sin \psi_0'}{\mu \sin^2 \psi_0' + \mu_0 \cos^2 \psi_0'} \right\}$$

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Here  $K = A_{11}/R$ . Value of  $\gamma_{I_0}$  is shown on Fig. 3, but direction of counting of  $\psi_0'$  on Fig. 4. Equation (9)

Calculation of Cylindrical Waveguides  
With Transverse Magnetized Ferrite.  
Brief Communication

77791  
SOV/109-5-2-24/26

shows that the wave polarization is being changed in  
the system. The last addendum of Eq. (9) determines the  
properties of the system, which depend on the sign of  
 $\Gamma$ . A. Gurevich helped. There are 4 figures, and 3  
Soviet references.

SUBMITTED: August 14, 1959

Card 12/12

MASLENNIKOVA, V.V.

Thrombosis of the large vessels of the brain. Vop.neirokhir.  
no.5:11-16 '61. (MIRA 14:11)

1. Instituta nevrologii i neyrokhirurgii Montvideo (Urugvay).  
(CEREBROVASCULAR DISEASES)

KOREYSHA, L.A., prof.; MASLENNIKOVA, V.V.; GREKHOV, V.V. (Moskva)

Trigeminal neuralgia in tumors of the hypophysis. Vop.neirokhir.  
25 no.1:49-53 '62. (MIRA 15:1)

1. Nauchno-issledovatel'skiy ordena Trudovogo Krasnogo Znameni  
institut neyrokhirurgii imeni akad. N.N. Burdenko AMN SSSR.  
(NEURALGIA, TRIGEMINAL) (PITUITARY BODY--TUMORS)

ACCESSION NR: AP4038612

S/0109/64/009/004/0616/0624

AUTHOR: Maslennikova, V. V.

TITLE: Ferrite sphere in a coaxial waveguide

SOURCE: Radiotekhnika i elektronika, v. 9, no. 4, 1964, 616-624

TOPIC TAGS: microwave technology, ferrite, waveguide, waveguide coupler, yttrium iron garnet, coaxial cable, preselector, limiter

ABSTRACT: To facilitate the employment of yttrium iron garnet (YIG) single crystals in microwave elements and to devise design procedures that permit determination of the optimal parameters of such devices, a method first used by A. G. Gurevich (Radiotekhnika i elektronika, 1963, v. 8, no. 5, 780) is extended to include coaxial waveguides containing ferrite spheres and to determine the magnetization of the sphere in the self-consistent field of the TEM wave in the guide. The transmission and reflection coefficients are determined for an infinite and short-circuited waveguide, for two spheres in a waveguide, and for two crossed waveguides coupled by the ferrite sphere. The theoretical results can be used to determine the frequency characteristics of a preselector-limiter and to estimate

Card 1/4

ACCESSION NR: AP4038612

the degree of signal limitation. The calculations were checked by experiments made on three YIG single-crystal spheres (1.82, 1.44, and 1.05 mm dia) grown in the Laboratory of Ferrites and Ferroelectrics of the Institut poluprovodnikov AN SSSR, and the agreement proved satisfactory. "The author is grateful to A. Gurevich for suggesting the problem and G. A. Smolenskiy and the members of the seminar under his guidance for a discussion of the results." Orig. art. has: 7 figures and 27 formulas.

ASSOCIATION: None

SUBMITTED: 16Feb63

ENCL: 02

SUB CODE: EC

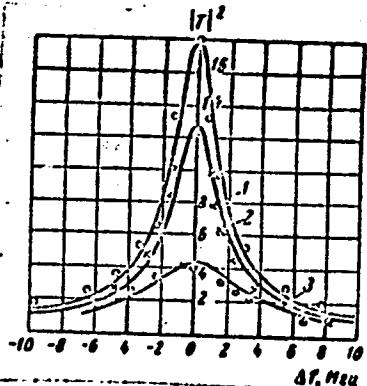
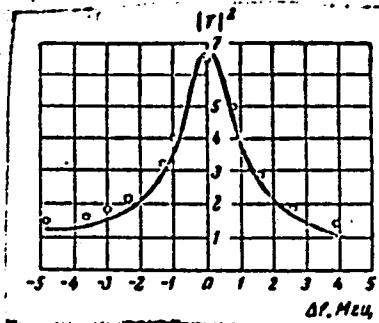
NR REF Sov: 005

OTHER: 003

Card 2/4

ACCESSION NR: AP4038612

ENCLOSURE: 01



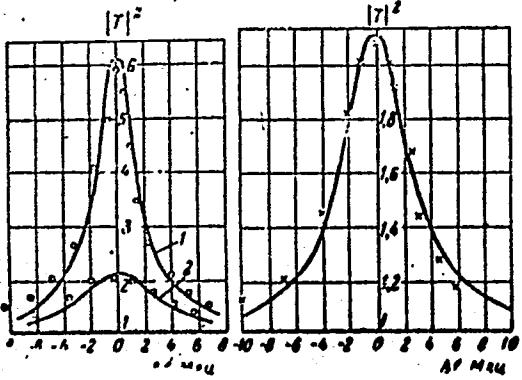
Dependence of the transfer coefficient on the frequency detuning  
for a ferrite sphere 1.82 mm in dia.,  $4\pi M_0 = 1800$  Gauss, placed in a  
coaxial waveguide (i.d. 7 mm, o.d. 16 mm)<sup>0</sup> at various distances from the  
waveguide center (in millimeters):

Left: 5.2. Right: 1 - 3.18, 2 - 3.55, 3 - 4.09

Card 3/4

ACCESSION NR: AP4038612

ENCLOSURE: 02



Dependence of transfer coefficient on the detuning for a sphere 1.44 mm dia (left figure) for  $r_0 = 3$  mm,  $\Delta h_c = 1.3$  Oe (1) and  $r_0 = 4.27$  mm (wall) and  $\Delta h_c = 2.5$  Oe(2). On the right diagram is shown the same dependence for a sphere 1.05 mm dia. located at a distance  $r_0 = 2.8$  mm from the center of the waveguide ( $\Delta h_c = 2$  Oe).

Card 4/4

MASLENNIKOVA, V.V.

Calculation of waveguides containing ferrite spheres using a  
circuit theory analysis method. Radiotekh. i elektron. 9 no.5:  
805-813 My '64. (MIRA 17:7)

ACC NR: AP6036380

SOURCE CODE: UR/0109/66/011/011/2077/2079

AUTHOR: Safant'yevskiy, A. P.; Rykov, S. V.; Maslennikova, V. V.

ORG: none

TITLE: A superhigh-frequency ferromagnetic magnetostatic amplifier <sup>25</sup>

SOURCE: Radiotekhnika i elektronika, v. 11, no. 11, 1966, 2077-2079

TOPIC TAGS: shf amplifier, magnetic amplifier

ABSTRACT: Two models of a resonator-type ferromagnetic magnetostatic amplifier with oscillations of the 2, 0, 1 type were investigated. In the first model (see Fig. 1) a cylindrical resonator with  $H_{101}$ -type pumping oscillations and  $E_{010}$  signal oscillations was used to concentrate the signal and the pumping fields. In the second model (see Fig. 2) crossed rectangular  $E_{110}$  type resonators were used. To reduce the pumping power and improve coupling between the ferrite and the resonator, the dimensions of the rectangular resonators, along which the index of  $E_{110}$ -type oscillations was zero, were reduced to a structurally permissible value of 2 mm. A ferrite sphere made of a single-crystal yttrium garnet was placed in the coupling loop between the magnetic pumping field and the electric signal field. The amplifier parameters were measured by the usual methods, using a magnetron as a pumping source. The pumping pulse duration was varied from 0.8 to 20  $\mu$ sec and the repetition frequency,

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ACC NR. AP6036380

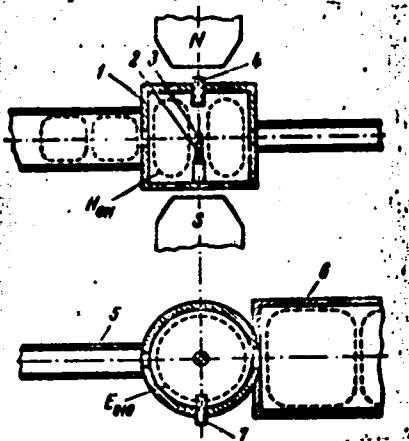


Fig. 1. Amplifier with a cylindric resonator

1 - Cylindrical resonator;  
 2 - plastic holder; 3 - ferrite sample;  
 4, 7 - adjusting screws;  
 5, 6 - waveguides.

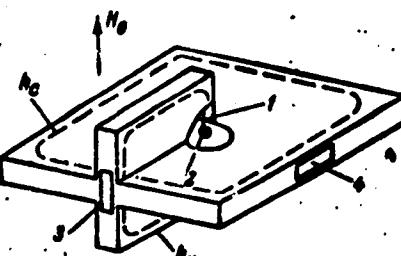


Fig. 2. Amplifier with crossed resonators

1 - Plastic holder; 2 - ferrite sample;  
 3, 4 - matching diaphragms;  $h_p$  and  
 $h_s$  - magnetic pumping and signal fields.

Card 2/3

ACC NR: AP6036380

from 0.5 to 500 kc. It was found that the gain area of the ferromagnetic magneto-static amplifier increases sharply when resonator coupling with the ferrite sample is used. Orig. art. has: 4 figures. The authors thank Monosov, Ya. A. for submitting results which were conducted earlier by him in the field of theoretical and experimental research of ferromagnetics, and for his help in this work.

SUB CODE: 09/ SUBM DATE: 13Jan66/ ORIG REF: 005/ OTH REF: 001/  
ADD PRESS: 5106

Card 3/3

TSPLIS, D.S.; MACHENNIKOVA, V.YA.

Mutual limited solubility of gases in the water - butane system.  
Dokl. AN SSSR 157 no. 2:426-429 Jl '64. (MIRA 17:7)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut  
azotnoy promyshlennosti i produktov organicheskogo sinteza.  
Predstavлено академиком С.И. Volkovichem.

TSIKLIS, D.S.; MASLENNIKOVA, V.Ya.

Mutual limiting solubility of gases in the system water - nitrogen  
Dokl. AN SSSR 161 no.3:645-647 Mr '65. (MIRA 18:1)

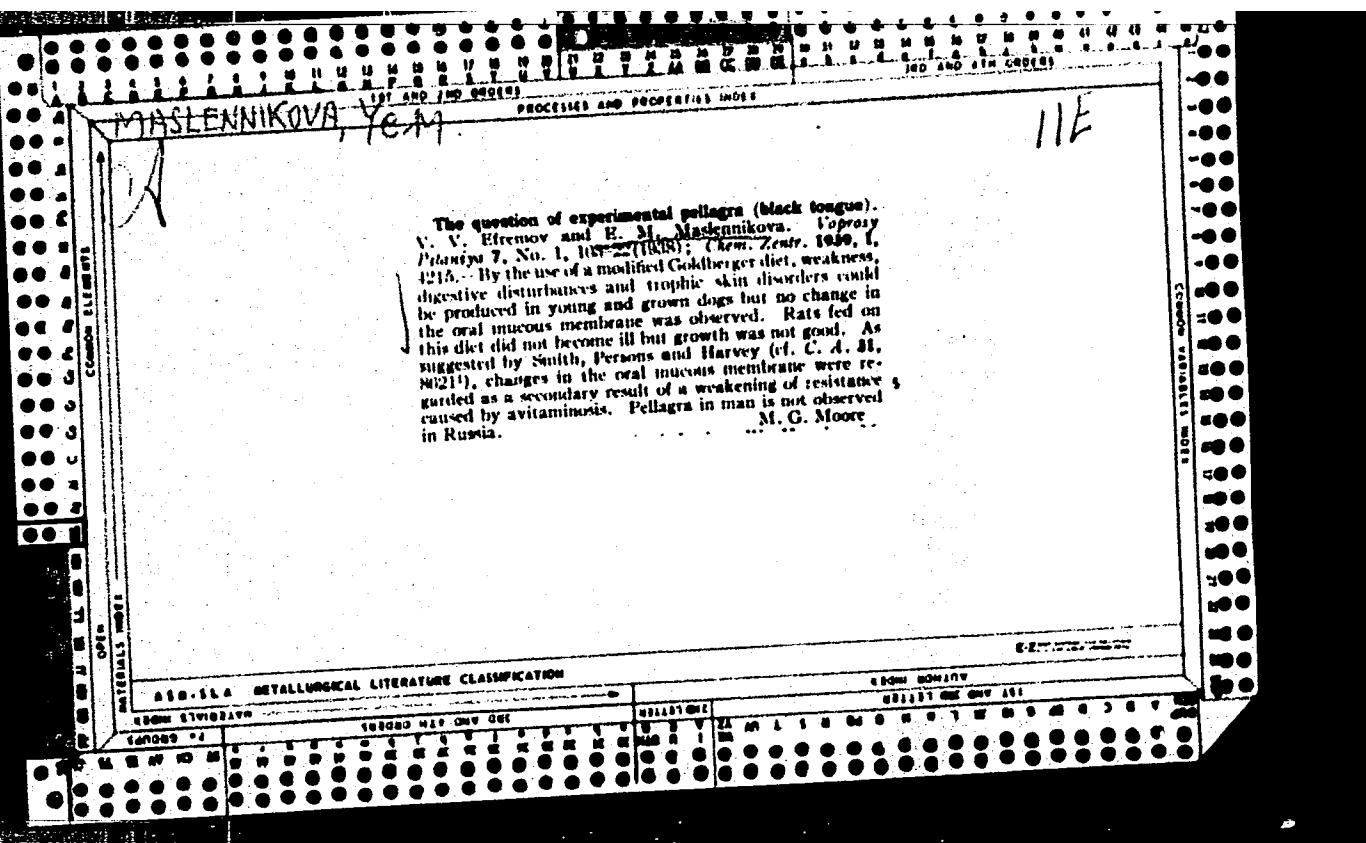
1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut  
azotnoy promyshlennosti i produktov organicheskogo sinteza. Sub-  
mitted August 27, 1964.

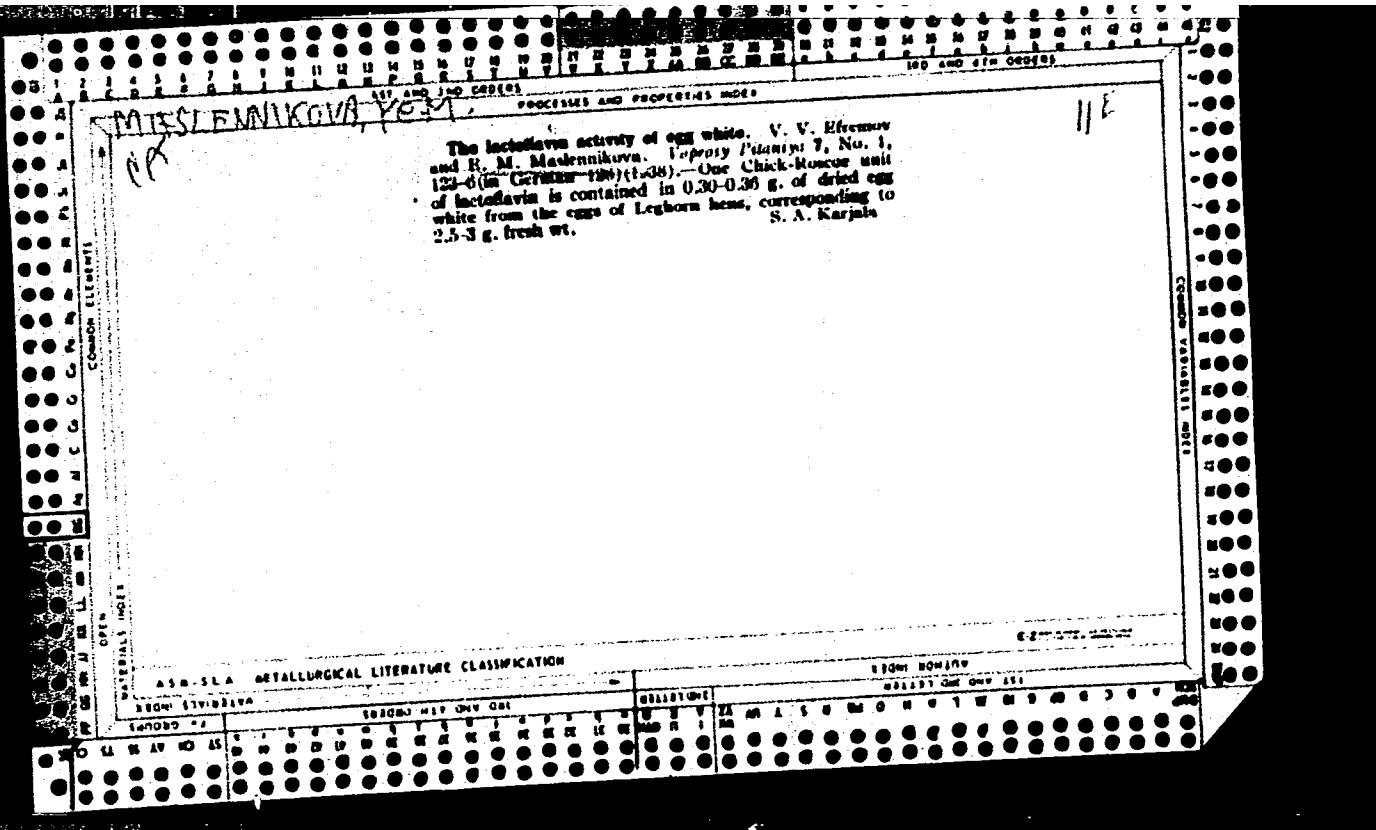
MASLENNIKOVA, Ye. A.

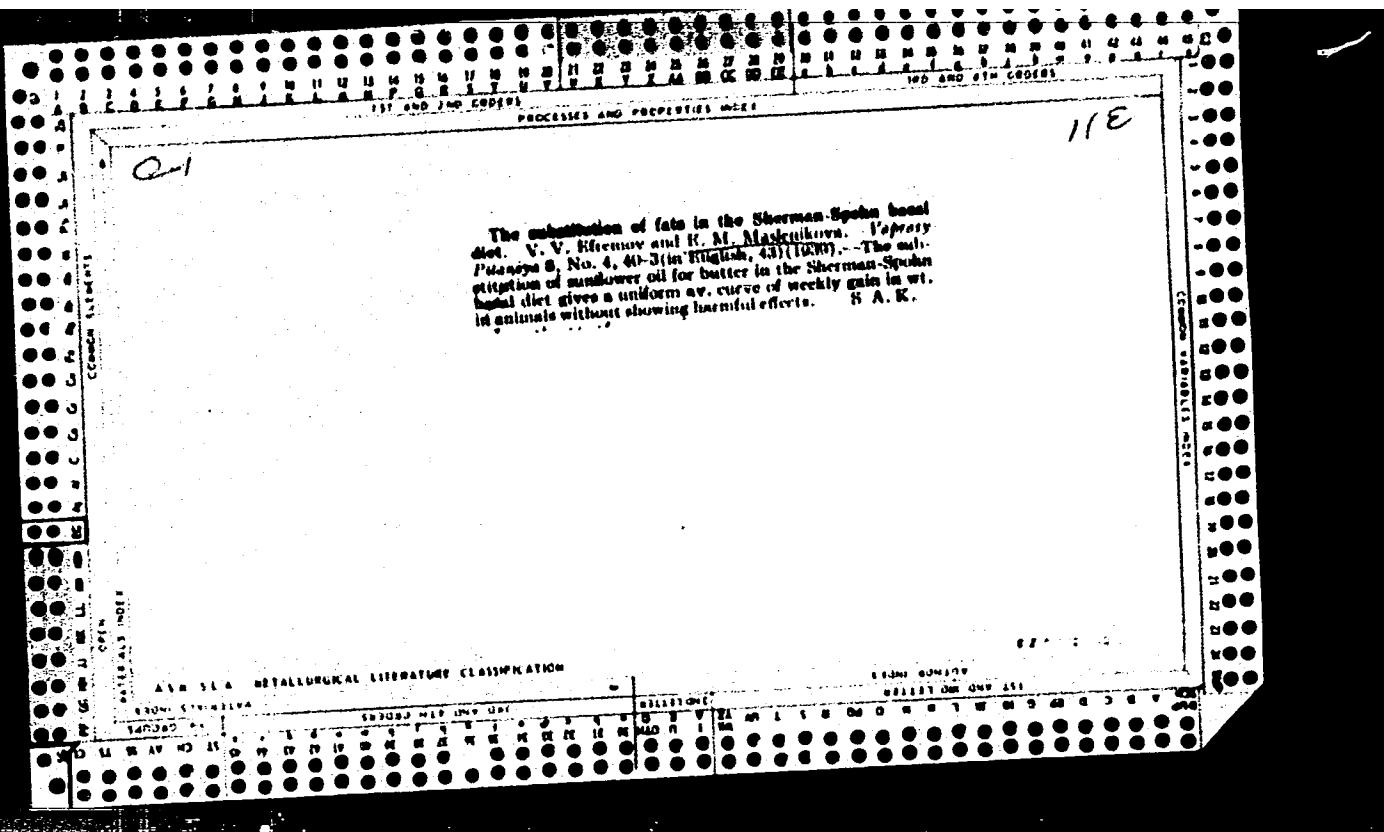
Botany - Physiology

Concerning the discussion of plant physiology. Sel. i sem. 20, No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.







MASLENNIKOVA, Ye. M. Cand. Biolog. Sci.

Dissertation: "Avitaminosis c in Dogs." Inst of Nutrition, Acad Med  
Sci USSR, 5 Apr 47.

SO: Vechernaya Moskva, Apr, 1947 (Project #17836)

CH

NE

Chronic avitaminosis B<sub>1</sub> (arboavitaminosis). B. M. Mas-  
tikovs. Zher. Obshchey Biol. (J. Gen. Biol.) 11, 397-404  
(1950).—Chronic arboavitaminosis in dogs and rats lowers  
metabolic reduction activity, and impedes utilization of  
other vitamins. Necrosis and other effects are described.  
Julian F. Smith

MASLENIKOVA, E. M.

Chemical Abstracts  
Vol. 48 No. 5  
Mar. 10, 1954  
Biological Chemistry

Vitaminization of food products with vitamin D. E. M.  
Maslenikova (Food Inst., Acad. Med. Sci. USSR).  
Voprosy Pitanija 12, No. 3, 31-11 (1953).  
It is pointed out that in nutrition of young children enrichment of food with vitamin D may be desirable, but that the possibilities of D-hypervitaminosis must be kept in mind, for this may develop even with a small oversupply that is extended for long periods of time. G. M. K.

MASLENIKOVA, E.M.

USSR .

A relation between acrichia (ataxia) and vitamin B<sub>1</sub> in the organism of white rats. M. A. Novikova and E. M. Maslenikova (Nutrition Inst., Acad. Med. Sci. U.S.S.R., Moscow). *Voprosy Pitaniya* 13, No. 4, 21-7(1954).—On prolonged (2-3 months) administration (orally) of large amounts of atebitin (I) (5-25 mg./100 g. body wt./each 2nd day) for growing white rats the animals lost body wt. continuously and showed symptoms of vitamin B<sub>1</sub> (II) avitaminosis leading to the animals' death. The addn. of large doses of II (10-25 γ/day) for the sick animals caused a rapid recovery though the animals were not able to reach the body wt. and overall condition of the control animals. The necroses at the internal organs resulting from the prolonged addn. of I could not be cured by II. The amt. of II in the liver of the animals having received I was only 1/4 as much as in the liver of the control animals; there were no such differences in the amt. of II in heart and kidneys of the two groups. It is concluded that I possesses anti-II properties and, therefore, II might be used for curing the I toxicoses. E. Wiericki

MASLENIKOVA, E.M.

Effect of ethionamide on vitamin C metabolism in the animal organism. E. M. Maslenikova (Nutrition Inst., Acad. Med. Nauk U.S.S.R., Moscow). *Voprosy Pitaniya* 13, No. 5, 11-12 (1951).—The interrelation between riboflavin (I) and vitamin C (II) in the animal organism has been studied. Young white rats, 34-37 g., were fed a diet contg. the normal amt. of protein (18%) and all the known vitamins, except I; the diet of the control animals contained also I (25%). When the exp'tl. animals had shown the first signs of riboflavinosis they were fed the diet with small doses of I (2.5-5 mg.) in order to prolong their lives. Daily excretions of II, as well as the amts. of II present in different internal organs and in the blood plasma of the animals, were used as criteria of the I-II interrelationship. The results are given in 2 tables and 2 figures, which comprise the data for 23 animals, some of them being on the test for 290 days. The results for the control animals (II) and for the animals with distinct signs of riboflavinosis (5) are the following: daily excretion of II 0.333 (min.)-3.830 (max.) and 0.01; the amt. of II in the liver 14.1-38.3 and 7.02-14.3, kidney 7.7-21.1 and 5.16-7.32, adrenal glands 259.3-457.1 and 295.7-523.0, lungs 10.29-23.3 and 14.7 (only 1 deta.), intestines 27.17-30.32 and 10.05, spleen 32.39-48.80 and 4.04, heart 2.50-5.10 and 0, and in blood plasma 0.697-1.392 and 0.030-0.204 mg. %, resp. The addn. of I to the diet of the animals suffering from riboflavinosis increased rapidly the amt. of II in the blood plasma and in urine, much less in the tissues. Addn. of II to the diet of the sick animals (5-10 mg./100 g. body wt., per os or by injection) did not increase markedly the daily excretion of II. E. Wierbleki

MASLENNIKOV, YE. M.

YEFREMOK, V.V.; KOSYENKO, S.A.; MAKARYCHEV, A.I.; MASLENNIKOVA, Ye.M.;  
TIKHOMIROVA, A.N.

Effect of some vitamins B on the higher nervous activity. Vitaminy  
no.2:40-60 '56.  
(MIRA 10:8)

1. Laboratoriya-izucheniya-vitaminov i laboratoriya vysshey  
nervnoy deyatel'nosti Institut pitaniya AMN SSSR, Moskva  
(VITAMINS--B) (CEREBRAL CORTEX) (DEFICIENCY DISEASES)

MASLENIKOVA, Ye.M.

Role of vitamin B<sub>2</sub> (riboflavin) in metabolism; review of the  
literature. Vop. pit. 15 no.1:3-9 Ja-F '56 (MLRA 9:4)

1. Iz laboratorii izucheniya vitaminov(zav.-prof. V.V. Yefremov)  
Instituta pitaniya AN SSSR, Moskva.  
(VITAMIN B<sub>2</sub>, physiology,  
review)

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001032730005-0

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001032730005-0"

Ye. M. MASLENKOVA

MASLENKOVA, Ye.M.

METABOLISM

Subsequently, the excretion of vitamin  $B_2$ , underwent a sharp drop, and when it was not supplemented, fell as low as 0. "The Study of the Metabolism of Vitamin  $B_2$  (Riboflavin) in Protracted Wound Healing Processes," by Ye.M. Maslenkova, M.N. Arshinova and I.G. Gvozdova, Laboratory for the Study of Vitamins (Head - Prof. V.V. Yefremov) of the Institute of Nutrition of the Academy of Medical Sciences USSR and the Institute of Surgery imeni A.V. Vishnevskiy of the Academy of Medical Sciences USSR, Moscow, Voprosy Pitaniya, No 3, May-June 1957, pp 10-15.

Studies of the metabolism of vitamin  $B_2$  in patients with trophic ulcers and with extensive burns are reported by the authors. Fourteen patients with trophic ulcers and 10 with second and third degree burns were examined.

The authors' findings are as follows:

1. The excretion of vitamin  $B_2$  with the urine is low in patients with trophic ulcers, whether on an ordinary diet or with the addition of high doses of this vitamin to the regimen. This seems to explain the deficiency of vitamin  $B_2$  in the organism of such patients.
2. Patients with extensive second and third degree burns, both before and after vitamin  $B_2$  was administered, sometimes excreted more than 100% of the dose given.

-27-

1/2

Материалы № 4-147.

YEFREMOV, V.V.; MAKARYCHEV, A.I.; MASLENKOVA, Ye.H.; TIKHOMIROVA, A.N.(Moskva)

Effect of riboflavin deficiency on the higher nervous activity and  
the trophic functions of the organism [with summary in English].  
Izop. pit. 16 no.2:37-44 Mr-Ap '57. (MLRA 10:10)

1. Iz laboratorii izucheniya vitaminov (zav. - prof. V.V.Yefremov)  
i laboratorii vyschey nervnoy deystvinosti (zav. - prof. A.I.  
Makarychev) Instituta pitaniya AMN SSSR, Moskva.

(VITAMIN B-2 DEFICIENCY, exper.  
eff. on conditioned reflexes & nutrition in dogs (Rus))

(REFLEX, CONDITIONED

eff. of exper. vitamin B2 defic. in dogs (Rus))

(NUTRITION

same)

STEPANYAN-TARAKANOVA, A.M.; GOLUBEVA, L.Ya.; ZIKEYEVA, V.K.; KURTSIN<sup>1</sup>, O.Ya.  
TIKHOIROVA, A.N.; MASLENIKOVA, Ye.M.; SOROKIN, G.Ye.;  
ZAKHARYCHEVA, A.A.

Effect of combined therapy on patients with the cerebroendocrine  
form of obesity. Vop. pit. 18 no. 6:16-24 N-D '59. (MIRA 14:2)

1. Iz Instituta pitaniya AMN SSSR, Moskva.  
(CORPULENCE) (GLUTAMATES) (CORTISOME)

YEFREMOV, V.V., prof., red.; MASLENIKOVA, Ye.M., red.; ZUYEVA, N.K., tekhn.  
red.

[Current information on the therapeutic use of vitamins] Sovremen-  
nye dannye po lechebnomu primeneniiu vitaminov. Pod red. V.V.Efre-  
mova. Moskva, Gos. izd-vo med. lit-ry Medgiz. 1960. 278 p.  
(MIRA 14:7)

1. Vsesoyuznoye soveshchaniye po vitaminam. 4th, Moscow.  
(VITAMIN THERAPY)

MASLENIKOVA, Ya.M.; TIKHOMIROVA, A.N.; KRAYKO, Ye.A.; PENAR, O.I.; GVOZDOVA, L.G.; SOLOV'YEVA, L.Ya.; KULICHENKO, Ye.V.; GEL'FEMBEYN, A.Sh.

Study of the metabolism of vitamins in workers in the hot shop of a metallurgical factory. Vop. pit. 19 no.2:3-9 Mr-Ap '60.

(MIRA 14:7)

1. Iz laboratorii izucheniya vitaminov (zav. - prof. V.V.Yefremov)  
Instituta pitaniya AMN SSSR, Moskva.  
(VITAMINS) (HEAT--PHYSIOLOGICAL EFFECT)

MASLENKOVA, Ye.M.; GVOZDOVA, L.G.; LEVCHENKO, Ye.A.; MOIN, M.L.

Studies on the metabolism of vitamin B<sub>2</sub> (riboflavin) and its  
therapeutic use in protracted nonhealing wounds. Khirurgia  
36 no.11:86-91 N °60. (MIRA 13:12)

1. Iz laboratorii isucheniya vitaminov (sav. - prof. V.V.  
Yefremov) Instituta pitaniya (dir. - chlen-korrespondent AMN  
SSSR prof. O.P. Molchanova) AMN SSSR i Moskovskogo ortopedi-  
cheskogo gospitalya (nach. - doktor med.nauk S.N. Voskresenskiy)  
Ministerstva zdravookhraneniya SSSR.  
(ULCER) (WOUNDS) (RIBOFLAVIN)

MASLENIKOVA, Ye.M.

Human riboflavin requirements. Vop.pit. 20 no.2:76-82 Mr-ap '61.  
(MIRA 14:6)  
1. Iz laboratorii izucheniya vitaminov (zav. - prof. V.V.Yefremov)  
Instituta pitaniya AMN SSSR, Moskva.  
(RIBOFLAVIN)

GRUBINA, A.Yu.; KRAYKO, Ye.A.; MASLENIKOVA, Ye.M.; RAZUMOV, M.I.; SERGEYEVA,  
M.A.; SKIRKO, B.K.; SHISHOVA, O.L.

Effect of food enriched by methionine on the development of  
experimental silicosis in white rats. Vop.pit. 20 no.3:41-46 My-  
Je '61. (MIRA 14:6)

1. Iz Instituta pitaniya AMN SSSR, Moskva.  
(LUNGS—DUST DISEASES) (METHIONINE) (DIET)

GRUBINA, A.Yu.; YEZHOOVA, Ye.N. [deceased]; KRAYKO, Ye.A.;  
MASLENKOVA, Ye.M.; RAZUMOV, M.I.; SERGEYEVA, M.A.;  
SKIRKO, B.K.

Influence of riboflavin on the course of experimental silicosis  
in white rats. Vop. pit. 20 no.6:40-45 N-D '61. (MIRA 15:6)

1. Iz Instituta pitaniya AMN SSSR, Moskva.  
(LUNGS--DUST DISEASES)  
(RIBOFLAVIN--PHYSIOLOGICAL EFFECT)

S/24P1  
1016/1216

27.1100

Maslenikova, E. M.

Author:

Title:

Periodical:

Voprosy pitaniya, v. 21, no. 3, 1962, 56-61

THE EFFECT OF ILLUMINATION ON THE METABOLISM OF RIBOFLAVIN

Text: Climatic conditions influence food requirements and metabolism. Light is one of the important factors of the external environment affecting the metabolism of various food products, and in particular, vitamins. Riboflavin is especially photosensitive. The study of the effect of Light on riboflavin metabolism may contribute to the understanding of the mechanism of the physiological action of this vitamin. Male white rats (200g) were used in these experiments. The rats were exposed to direct sunlight: 30 minutes on the first day, 1 hr daily during subsequent 5 days and 2 hrs daily during further 7 days. The riboflavin excretion in the urine and the riboflavin content of the blood and of the different organs were determined. With low irradiation doses (2.5 erythemic doses) there was an increase in the blood level of riboflavin, while the concentration of the vitamin in the organs remained unchanged. With high doses (9 erythemic doses) the blood level dropped and that in the organs remained unchanged. Prolonged exposure to sunlight reduced the riboflavin level in the blood and organs. Moderate exposure

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S/244/62/021/003/001/001  
I016/I216

27.11.00

Author: Maslenikova, E. M.

Title: THE EFFECT OF ILLUMINATION ON THE METABOLISM OF RIBOFLAVIN

Periodical: Voprosy pitaniya, v. 21, no. 3, 1962, 56-61

*Text:* Climatic conditions influence food requirements and metabolism. Light is one of the important factors of the external environment affecting the metabolism of various food products, and in particular, vitamins. Riboflavin is especially photosensitive. The study of the effect of Light on riboflavin metabolism may contribute to the understanding of the mechanism of the physiological action of this vitamin. Male white rats (200g) were used in these experiments. The rats were kept on a synthetic diet supplied with 20 $\gamma$  riboflavin daily. The animals were exposed to direct sunlight: 30 minutes on the first day, 1 hr daily during subsequent 5 days and 2 hrs daily during further 7 days. The riboflavin excretion in the urine and the riboflavin content of the blood and of the different organs were determined. With low irradiation doses (2.5 erythemic doses) there was an increase in the blood level of riboflavin, while the concentration of the vitamin in the organs remained unchanged. With high doses (9 erythemic doses) the blood level dropped and that in the organs increased. Prolonged exposure to sunlight reduced the riboflavin level in the blood and organs. Moderate exposure to

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THE EFFECT OF ILLUMINATION.....

S/244/62/021/002/001/001  
I016/I216

light enhances the ability of tissues to retain riboflavin. Ample supply of riboflavin increases the animal's resistance to irradiation.

*Association:* Laboratoriya izucheniya vitaminov Institute pitamiya Ak. med. nauk. SSSR, Moskva (The Vitamin Laboratory, Institute of Nutrition As. Med. Sci. USSR, Moscow).

*Submitted:* October 5, 1960

X

Card 2/2

GRUBINA, A.Yu.; KRAYKO, Ye.A.; MASLENKOVA, Ye.M.; RAZUMOV, N.I.;  
SERGEYEVA, M.A.; SKIRKO, B.K.

Effect of riboflavin- and methionine-enriched diets on the  
course of experimental silicosis. Vop. pit. 22 n°.4:35-36  
Jl-Ag '63. (MIRA 17:10)

1. Iz Instituta pitaniya AMN SSSR, Moskva.

MASLENNIKOVA, Ye. V., Cand. Med. Sci., — (diss) "X-ray characteristics of  
focal and disseminated pulmonary tuberculosis during anti-bacterial treatment,"  
Kharkov, 1961, 16 pp (Kharkov State Medical Institute) 300 copies <sup>9-61</sup> ~~1000 copies~~  
(KL-Supp 9-61, 191)

BORODULINA, A.A.; MASLENNIKOVA, Z.A.

Use of mixed liquid fertilizers for the foliar feeding of  
cotton. Uzb. biol. zhur. 7 no.5:49-52 '63.

(MIRA 18:11)

1. Institut genetiki i fisiologii rasteniy AN UzSSR.

*Ca* MASLENNIKOVA, Z. I.

7

R., "determination of starch on masses and on cloth. V.  
S. Rostovtsev and Z. I. Maslennikova. Russch.-Fiziko-kemi-  
ch. Trudy, Institut Kataliza, Tomsk. Tad. Khimichesk-  
h. Prom., 18, 109-14 (1954).—Soil 2 g. of cloth 3 min.  
in 15 ml. of a min. enzyp, 3 g. Chloramine T, 3 g. neutral  
catalyst, 3 g. NaOH, and 0.1 g. CuO<sub>2</sub>.H<sub>2</sub>O in one l. H<sub>2</sub>O.  
Use the resulting ratio for the usual starch data. (Invertase  
of the enzyp, etc.) by acidification with AcOH, addn. of  
0.1 N I, and color comparison. G. M. Komissarov

MASLENNIKOVA, Z.P.; MOROZOVA, I.V.; BIBIKOVA, V.A.

Ticks of the subfamily Ixodoidea of mammals in the Saryishikotrau  
desert. Trudy Inst. zool. AN Kazakh. SSR 22:166-173 '64.

(MIRA 17:12)

MASLENNIKOVA, Z.P.; GORBUNOVA, A.I. [deceased]

Biology of fleas of greater gerbils in the northern desert  
subzone following extermination of rodents aimed at the elimina-  
tion of plague epizootic. Zool. zhur. 44 no.9:1416-1419 '65.  
(MIRA 18:10)

I. Sredneaziatskiy nauchno-issledovatel'skiy protivochumnyy  
institut, Alma-Ata.

BIBIKOVA, V.A.; GORBUNOVA, A.I. [deceased]; MASLENNIKOVA, Z.P.; MORUZOVA,  
I.Y.; SHMUTER, M.F.

Methods of studying the abundance of fleas of the greater  
gerbil. Zool.zhur. 44 no.8:1214-1218 '65.

(MIRA 18:11)

1. Sredneaziatskiy nauchno-issledovatel'skiy protivochumnyy  
institut, Alma-Ata.

ACC NR: AP7001165 (AN) SOURCE CODE: UR/0439/65/044/008/1214/1218

AUTHOR: Bibikova, V. A.; Gorbunova, A. I.; Maslennikova, Z. P.; Morozova, I. V.; Shmuter, M. F. --Schmuter, M. F.

ORG: Central Asian Antiplague Research Institute, Alma-Ata (Sredneaziatskiy nauchno-issledovatel'skiy protivochumnyy institut)

TITLE: Method of studying population density of fleas in *Rhombomys opimus* Licht.

SOURCE: Zooloticheskiy zhurnal, v. 44, no. 8, 1965, 1214-1218

TOPIC TAGS: flea, flea reproduction, flea migration, plague transmission, disease vector, mole

ABSTRACT: A technique for total count of fleas found in the burrows of *Rhombomys opimus* Licht. is described. The technique consists of trapping and counting the migrating parasites after the animals are removed from the burrows. Due to a relatively stable migration and the reproduction rate of fleas, three samples suffice for the total count. In practical terms, it means that all fleas present in the burrows can be trapped during the 7-45 day period after the removal of the animals. The total flea population in the burrows can be estimated on the basis of the relatively

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UDC: 595.775:599.323.4 Rhombomys:591.526-59.08

ACC NR: AP7001165

stable percentages obtained in sampling procedures. In view of the significant role of fleas in transmission of plague, the importance of monitoring the flea populations is stressed by the authors. Orig. art. has: 1 table. [Based on authors' abstract] [WA-50]

SUB CODE: 06/SUBM DATE: none/ORIG REF: 006/CIA

Card 2/2

ACC NR: AP7000992

(A, N)

SOURCE CODE: UR/0439/65/044/009/1416/1419

AUTHOR: Maslenikova, Z. P.; Gorbunov, A. I. (Deceased)

ORG: Central Asian Antiplague Institute, Alma-Ata (Sredneaziatskiy nauchno-issledovatel'skiy protivochumnyy institut)

TITLE: The biology of fleas of great gerbils in the northern desert subzone after rodent extermination aimed at the suppression of plague epizootics

SOURCE: Zoologicheskiy zhurnal, v. 44, no. 9, 1965, 1416-1419

TOPIC TAGS: parasitology, animal parasite, disease vector, epizootology, DISEASE CONTROL, RODENT

ABSTRACT: The longevity of *Xenopsylla* fleas after a highly successful extermination of their gerbil hosts (species *Rhomomys opimus*) in 1959-1961 was studied in the Sary-Ishik-Otrau sands. *Xenopsylla skrjabini* and *Xenopsylla hirtipes* fleas represented 96-97% of the original population of fleas in rodent burrows. It was found that fleas which had not fed since autumn and fleas hatched before or after gerbil extermination, died by the following spring. Of the fleas surviving, most still had traces of blood in their stomachs. After extermination, the number of fleas per gerbil colony dropped (fall to spring) from 1565 to 61 in sands and from 4244 to 297 in soils overgrown with saxaul plant. Two years after extermination, the flea population was reduced more than 100 times, although 20-40% of colonies were still inhabited. Orig. art. has: 1 table. [WA-50]

SUB CODE: 06/ SUBM DATE: none/ ORIG REF: 007/

Card 1/1

UIC: 595.775:599.323.4 Rhombomys: 591.5

MASLENNIKOVA, Z.V.; DENISOV, S.S.; MUZYCHENKO, V.P.

Coulometric determination of small bromine numbers on the  
BL-1 analyzer. Zav. lab. 29 no.6:671-674 '63.

(MIRA 16:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniyu shidkogo topliva.  
(Coulometry) (Bromometry) (Olefins)

KARPOV, Remir Nikolayevich; MASLENOK, Boris Arkad'yevich; TSYGANKO,  
Oleg Leonidovich; BESKURNIKOV, A.I., inzh., retsenzent;  
SULOVYEV, A.V., kand. tekhn. nauk, retsenzent; AL'KIMOVICH,  
A.V., nauchn. red.; KIL'VEYN, G.S., red.

[Drives of the control system of power-generating marine  
nuclear reactors] Privody reguliruiushchikh organov sudo-  
vykh atomnykh energeticheskikh reaktorov. Leningrad,  
Sudostroenie, 1965. 250 p. (MIRA 19:1)

(N)

ACC NR: AM5027093

(N)

Monograph

UR/

Karpov, Remir Nikolayevich; Maslenok, Boris Arkad'yevich; Tsyganko, Oleg Leonidovich

Control drive mechanisms for nuclear power reactors on ships (Privody reguliruyushchikh organov sudovykh atomnykh energeticheskikh reaktorov) Leningrad, Izd-vo "Sudostroyeniye," 1965. 250 p. illus., biblio., 2000 copies printed.

TOPIC TAGS: nuclear powered ship, nuclear power technology, nuclear engineering, nuclear reactor control equipment

PURPOSE AND COVERAGE: This book is intended for engineers and technicians engaged in the design and use of nuclear reactor control drives. It may also be of use to students in schools of higher education studying marine nuclear power systems. Problems of designing control drive mechanisms for marine nuclear reactors are covered and the requirements for these devices are discussed. Existing designs are described, and recommendations for the design and choice of materials for individual units and parts are given. Methods of kinematic, reliability, and heat calculations, methods of constructing individual units, and methods and means of testing the experimental drives are covered.

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UDC: 621.491—52:629.12

ACC NR: AM5027093

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- Ch. II. Classification of control drive mechanisms for atomic power reactors. Design specifications -- 16
- Ch. III. Description of the designs and diagrams of drives which do not convert the types of motion -- 29
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- Ch. VII. Calculation and design of ball-screw motion-conversion mechanisms -- 90

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ACC NR: AM5027093

Ch. VIII. Calculation and design of drive gears and bearing<sup>17</sup> supports -- 118

Ch. IX. Design of individual drive units and parts -- 143

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SUB CODE: 18, 13/ SUBM DATE: 21Jun65/ DRIQ REF: 073/ OTH REF: 016

Card 3/3

MASLIY, L.K.; ALEKSANDROV, B.V.

Silicon-containing acid amides. Part 1: Preparation of methyldialkyl  
(ethylacetamido)methylsilanes. Zhur. ob. khim. 35 no.6:1058-  
1060 Je '65. (MIRA 18:6)

DULOVA, V.I.; MASLENKOVA, T.A.

Strength of acids in phenyl and ethyl ethers. Dokl. AN Uz.SSR  
no. 10:39-42 '59 (MIRA 13:3)

1. Sredneaziatskiy gosuniversitet im. V.I. Lenina. Predstavleno  
chlenom-korrespondentom AN UzSSR Kh. U. Usmanovym.  
(Acids) (Phenyl ether) (Ethyl ether)

11.4100

25354  
S/032/61/027/006/005/018  
B124/B203

AUTHORS: Maksimycheva, Z. T., Maslentsova, T. A., and Suleymanova, F.N.

TITLE: Determination of rubidium and cesium in the form of their boron fluorides

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 6, 1961, 667 - 668

TEXT: On the basis of a physicochemical study of the formation of  $\text{RbBF}_4$  and  $\text{CsBF}_4$  in aqueous and aqueous-alcoholic solution of fluoboric acid, it was stated that rubidium- and cesium boron fluorides of constant composition are formed at any ratio of the reacting components. Rb and Cs are quantitatively precipitated with a fourfold  $\text{HBF}_4$ -excess from a solution containing about 60% of ethyl alcohol. For a quantitative determination of Rb and Cs, the authors used a 1 N alcoholic solution of  $\text{HBF}_4$ . The synthesis of the latter and the quantitative determination were the same as for the determination of potassium in the reference (Z. T. Maksimycheva and N. Abdusalyamov. Zavodskaya laboratoriya, XVIII, 4, 403(1958)). For rewashing,

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## Determination of rubidium and...

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a mixture of ether and alcohol is recommended for rubidium boron fluoride, and a mixture of alcohol with a small quantity of fluoboric acid for cesium boron fluoride; 4-5 times rewashing is sufficient. The method was checked on pure salts. The mean relative error of the results is 0.03-0.14% for rubidium, and 0.23-0.80% for cesium. Smaller quantities of cesium than 15 mg cannot be determined by this method. Tables 1 and 2 give the mean values of determination of Rb and Cs in the presence of some foreign cations and anions. A fresh  $\text{HBF}_4$  solution must be used as it partly hydrolyzes with time, the resulting HF with the ions introduced in the solution forming fluorides which coprecipitate with the boron fluorides of Rb and Cs, and increase the analytical results. The determination is not disturbed by the presence of  $\text{Na}^+$ ,  $\text{Li}^+$ ,  $\text{Ca}^{2+}$ ,  $\text{Mg}^{2+}$ ,  $\text{Fe}^{3+}$ ,  $\text{Al}^{3+}$ ,  $\text{Cl}^-$ ,  $\text{NO}_3^-$ , and  $\text{SO}_4^{2-}$ . The relative error of determination does not exceed 1%. The method is not suitable for a separate determination of Rb, Cs, and K in mixtures. There are 2 tables and 1 Soviet-bloc reference.

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S/032/61/027/006/005/018  
B124/B203

Determination of rubidium and...

ASSOCIATION: Sredneaziatskiy gosudarstvennyy universitet im. V. I. Lenina (Central Asian State University imeni V. I. Lenin)

Table 1: Results of Rb' determination in the presence of some cations and anions.  
 Legend: A) salt, B) concentration ratio between salt and  $\text{RbNO}_3$  in moles C)  $\text{RbBF}_4$  content in the weighed portion, mg, D)  $\text{RbBF}_4$  found, mg, E) deviations, a) mg, b) mixture of all salts, c) 0.4 g each, d) 0.1 g each.

A) Соль	Б) Отношение концентрации соли к $\text{RbNO}_3$ в молях	С) Содержание $\text{RbBF}_4$ в измеренном веществе, мг	Д) Найдено $\text{RbBF}_4$ , мг	Е) Отклонение, %	
				а)	б)
$\text{Li}_2\text{SO}_4$	2	706,2	710,24	0,4	+0,56
$\text{LiCl}$	6	141,2	141,9	0,7	+0,49
$\text{NaCl}$	4	169,8	170,1	0,3	+0,17
$\text{Ca}(\text{NO}_3)_2$	1	428,8	430,7	1,3	+0,44
$\text{Mg}(\text{NO}_3)_2$	1	428,8	428,6	0,2	-0,04
$\text{FeCl}_3$	1	428,8	433,8	4,0	+0,93
$\text{AlCl}_3$	1	428,8	432,9	4,1	+0,93
$\text{FeCl}_3 + \text{AlCl}_3$	Пос.				
(1)	0,4 г	428,8	426,5	2,3	-0,54
Смесь всех солей	Пос.				
	0,1 г	428,8	431,3	2,5	+0,58
	д)				

Таб. 1

Card 3/4

MASLER -~~SL~~

A study of 1-phenylacetylcarbinol. III. Š. Bauer, J.  
Chejlik, L. Masler, and S. Ország (Sloven, akad. věd,  
Institut chem.). Chem. Zvesti 9, 604-7 (1956); cf.  
C.A. 48, 8193g.—PhCHAcOH [ $\alpha$ ]<sub>D</sub><sup>25</sup> -167 ± 3° (4% in  
alc.), reduced over PtO<sub>2</sub> gave optical active HOCHPhCH-  
MeOH (II), b. 83-5°, [ $\alpha$ ]<sub>D</sub><sup>25</sup> -21.25 ± 3° (4% in alc.),  
 $n_D^{20}$  1.5292. I reduced with Al amalgam gave II and PhCH<sub>2</sub>-  
Ac, [ $\alpha$ ]<sub>D</sub><sup>25</sup> 0° (4% in alc.),  $n_D^{20}$  1.5101. — Jan Micka

Country	: CZECHOSLOVAKIA	H-17
Category	Chemical Technology. Pharmaceuticals. Vitamins.	
	Antibiotics	
Abs. Jour	Ref Zhur-Khimiya, No 14, 1959, No 50736	
Author	Masler, S.; Bauer, L.; Orszagh, S.	
Institute	-	
Title	Determination for the Ephedrine Content in Ephedra Distachya L. of the Czechoslovakian Origin	
Orig Pub.	Chem. zvesti, 1956, 10, No 9, 599-600	
Abstract	In accordance with the Feng, Ch., T.; Read, B.P., method (J. Am. Pharm. Assoc., 1927, 16, 1034), analyses of the above indicated raw material revealed the presence of 0.05-0.06% of ephed- rine.--T. Zvarova	

Card: 1/1

H-90

MASL er L.

CZECHOSLOVAKIA / Organic Chemistry. Synthetic Organic G-2  
Chemistry.

Abs Jour: Ref Zhur-Khimiya, 1958, No 17, 57384.

Author : Bauer S., Masler L., Orszagh S., Mokry J., Tomko J.  
Inst : Not given.  
Title : Study of the L-Phenylacetylcarbinol. V.

Orig Pub: Chem. zvesti, 1957, 11, No 11, 651-655.

**Abstract:** Hydroxides of Fe, Ni, and Co, present in L-phenyl-acetylcarbinol (I) in quantities of 0.1% destroy completely the optical activity of I upon standing at approx. 20°. Addition of the above quantity 0.1% of ethylenediaminetetraacetic acid to I fully protects I from the deactivation that occurs in

Card 1/2

CZECHOSLOVAKIA / Organic Chemistry. Synthetic Organic G-2  
Chemistry.

Abs Jour: Ref Zhur-Khimiya, 1958, No 17, 57384.

Abstract: fractionation. For Part IV refer to Ref Zhur-  
Khimiya, 1957, 18991.

Card 2/2

43

Country : Czechoslovakia G  
Category : Organic Chemistry. Synthetic Organic Chemistry  
Abs. Jour. : Ref Zhur-Khimiya, No.12, 1959, No.42383  
Author : Bauer, S., Masler, L., Orszagh, S., Mokry, J., \*  
Institut. : Not given  
Title : On the Study of 1-Phenylacetylcarbynol. VI.  
  
Orig. Pub. : Chem. zvesti, 1958, 12, No.8, 509-512  
  
Abstract : The presence of  $\text{Fe(OH)}_2$  (II).  $\text{Ni(OH)}_2$  (III) or  $\text{Co(OH)}_2$  (IV) affects the synthesis of 1-ephedrine by means of the hydrogenated amination of  $1-\text{C}_6\text{H}_5\text{CH}(\text{OH})\text{COCH}_3$  (I) in reaction with  $\text{CH}_3\text{NH}_2$  in the presence of colloid Pt (German Patents 524806; 548459) in the medium  $(\text{C}_4\text{H}_9)_2\text{O}$  (2 aT): there is an optimum concentration for every hydroxide which accelerates the hydrogenated  
\* Tomko, J.

Card: 1/2

✓ Study of *t*-phenylacetylcarbinol. VII. Š. Bauer, L. Mašler, and S. Országh (Slovenské akad. vied. chem. inštav, Bratislava, Czech.). *Chem. svedis* 14, 639-41 (1968) (German summary); cf. *C.A.* 53, 31261. *t*-PhCHO(OH)Ac (*I*) boiled with Ac<sub>2</sub>O and acetylated with AcCl in C<sub>6</sub>H<sub>6</sub>N gives the optically active Ac ester, *b*<sub>D</sub> 140-1°, 139-40°, [α]<sub>D</sub><sup>25</sup> -211.8 ± 4° (c 4, EtOH), [α]<sub>D</sub><sup>25</sup> 1.5084, 1.5083. Benzoylation of *I* with BzCl in C<sub>6</sub>H<sub>6</sub>N yields an optically active Bz ester, *m.* 49-61°, [α]<sub>D</sub><sup>25</sup> -145.5 ± 4° (c 4.6, EtOH). No isomerization occurs during esterification of *I*. An optically active Me ether of *I*, *m.* 107-9°, [α]<sub>D</sub><sup>25</sup> -145.64° (c 4.6, EtOH) was also prep'd.  
Jarošicka

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(u) Distr: 4E2c(j)

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JF

MASLERY L.

7  
1-Phenylacetylecarbinol. VII. S. Bauer, L. Masler and  
S. Orzalesi (Slovenská akad. vied, Bratislava, Czech.),  
*Chem. listy* 52, 487-9 (1958) (German summary); cf. *C.A.*  
53, 10100d.—The occurrence of racemization of optically  
active 4-PICH(OH)Ac, m. 123-4°,  $[\alpha]_D^{25} -311.08^\circ$ , and  
1-phenyl-1-methoxy-2-propanone (I), m. 107-8°,  $[\alpha]_D^{25}$   
-153.80°, in KOH-MeOH, measured by rotary polarimeter,  
indicates that no enol compd. is formed, and that I does not  
undergo racemization since even after a long time it does  
not lose its optical activity. Jan Micksa

5  
2-May

JW  
1/1  
Distr: 4E2c(j)

JG

SIKL, Bohuslav, inz. C.Sc.; BAUER, Stefan, dr., inz., C.Sc.; MASLER,  
Ladislav, inz.

Isolation of heart glycosides from the red hellebore (*Helleborus purpurascens* w. A.k.). Part 2: Enzymatic hydrolysis of hellebrin in desglucohellebrin. Chem zvesti 16 no.3:206-209 Mr '62.

1. Ceskoslovenska akademie ved, Chemicky ustav Slovenskej akademie vied, Bratislava. Adresa autorov: Bratislava, Mlynske nivy 37, Chemicky ustav Slovenskej akademie vied).

- 36
- Prague, Collection of Czechoslovak Chemical Communications, Vol. 27,  
No. 4, April 1962 (continued)
9. Separation Methods for Natural Products. Part II. Dashed Diimine Separation and Double Waterman. V. ŠEKA, J. PERNÍK and V. HROZNA, Research Institute of Natural Products, Prague; pp. 332-342 (English abstract).
  10. Isolation of Components in the Group of Representative Alkaloids. Part XII. The Isolation of the Alkaloidal Component for the Synthesis of the Macrocyclic 19-Nor-D-hydroxy Androstan-3-one. J. ČERNÝ, S. FALČÍK and L. KALÍK, Research Institute of Natural Products, J. ČERNÝ, Prague; pp. 343-352.
  11. Isolation of Components in the Group of Representative Alkaloids. Part XIII. On the Synthesis of the Macrocyclic 19-Nor-D-hydroxy C-estra-11-en-3-one. J. ČERNÝ and J. PERNÍK of the Research Institute of Pharmacy and Biochemistry, Prague; pp. 357-361.
  12. Carbohydrate Derivatives. Part X. Isolation of the Chalcocarbo Glycosides. V. KALINA, J. BURK, O. BUDÍČEK and M. ŠTĚPÁN, Institute of Organic Chemistry and Technology of the Czechoslovak Academy of Sciences; pp. 362-371.
  13. On Proteins. Part XVIII. Structure of Peptides Obtained by Peptidase Activity of Glycosidases. V. PERNÍK, A. ČEDOUR, J. VENČEK and P. ŠEBESTYŇ of the Department of Organic Chemistry and Biochemistry, Prague; pp. 382-389 (English abstract).
  14. Carbohydrate Derivatives. Part XI. The Structure of Glycogen and of Its Glycosidase. I. HANUŠ, J. ŠALUN, O. BUDÍČEK and J. ČERNÝ of the Department of Organic Chemistry and Biochemistry, Chemical Institute of the Czechoslovak Academy of Sciences, Prague; pp. 393-399.
  15. Notes on the Investigation of the Antidiarrhoeal Activity of 5-(D-mannosyl-D-glucosyl)hexose. Part XVIII. Synthesis of Mannose-5-(D-glucosyl)-D-glucoside and of Their Analogs. I. J. KALINKA and P. ŠEBESTYŇ of the Institute of Organic Chemistry and Biochemistry, Prague; pp. 400-407 (English abstract).
  16. Notes on the Investigation of the Antidiarrhoeal Activity of 5-(D-glucosyl-D-glucosyl)hexose. I. ŠALUN, J. BURK, O. BUDÍČEK and J. VENČEK of the Institute of Organic Chemistry and Biochemistry, Chemical Institute of the Czechoslovak Academy of Sciences; pp. 408-413.
  17. Study of the Decomposition of Sodium Ferrate Solutions. J. NUSLOVÁ of the Slovak Institute of Technology, Bratislava; pp. 414-419.

2/2

MRS. LEER, L.

CSEREP, Albin; MASLER, Ladislav, inz. CSc.; SIKL, Dobroslav, inz. CSc.; BAUER, Stefan, dr. inz. CSc.

Adonitoxol, a new cardiac glycoside of Adonis vernalis L.  
Chem vesti 18 no.4:273-280 '64

1. Institute of Chemistry, Department of Saccharide Biochemistry  
Slovak Academy of Sciences, Bratislava, Dubravska cesta.

L 7688-66

ACC NR: AP6000909

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TITLE: Polysaccharides of yeast and yeast-like microorganisms. (II). Surface mannites of Candida albicans Berkhoult

SOURCE: Chemicke zvesti, no. 1, 1965, 21-27

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ABSTRACT: [Authors' English summary modified]: From the surface of cellular membranes of pathogenous yeast Candida albicans Berkhoult Strain 109, a water-soluble polysaccharide with a degree of polymerization of 36 and a specific rotation  $[\alpha]_D = +56^{\circ}$  was isolated. Methylesters of D-mannose found in the substance are described; glycerol is the only alcohol found in products of hydrolysis. It was found by means of acid hydrolysis that the mannite has alpha-glycosidic bonds. The investigated substance is

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a branched-chain polysaccharide compound of mannopyranose units bound by  $\alpha$ -1,2- and  $\alpha$ -1,6- bonds. The authors thank Prof. C.T. Bishop (Division of Applied Biology, National Research Council, Ottawa) for presentation of the specimens 3, 4, 6,-tri-O-methyl-D-mannose and 3, 4-di-O-methyl-D-mannose. The Candida albicans were cultivated in the Microbiology Laboratory of our department. Orig. art. has: 1 figure, 2 tables. [JPRS] 5

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Metabolism of salicylates in the organism. II. Effect of salicylate  
therapy on prothrombin time. Cas. lek. cesk. 93 no.22-23:616-620  
4 June 54.

1. Z Ustavu pre všeobecnú a kliniku biochemiu SU v Bratislave.  
Prednosta prof. MUDr T.R.Niederland.

(PROTHROMBIN TIME, effect of drugs on  
salicylates)

(SALICYLATES, effects,  
on prothrombin time)